

# Career Major Map: Diagnostic Services

Diagnostic Services employees analyze and record the state of a patient's health at the time of the examination. Employees in Diagnostic Services include all the technicians who conduct procedures that give physicians the information they need to provide effective treatment.

## Sample High School Schedule

| 9th Grade   | 10th Grade                              | 11th Grade                                     | 12th Grade                                     |
|---|---|--|--|
| Math for the Technologies 1 or Algebra  | Math for the Technologies 2 or Geometry | Math for the Technologies 3 or Algebra 2       | Math for the Technologies 4 or Pre-Calculus    |
| Physical Science*   | Biology 1 or Science Elective           | Chemistry 1 or Science Elective                | Physics or Science Elective                    |
| English 1   | English 2                               | English 3 or Communication for the Workplace 3 | English 4 or Communication for the Workplace 4 |
| Global Studies (World History or World Geography)   | U.S. History and Constitution           | Economics/Government                           | Health Science Technology 2                    |
| Physical Ed. or Junior ROTC   | Computer Science                        | Health Science Technology 1                    | Recommended Elective                           |
| Recommended Elective  | Recommended Elective                    | Recommended Elective                           | Recommended Elective                           |
| <b>Recommended Electives (four major electives required to graduate with a Diagnostic Services major)</b>   |   |  |  |
| Introduction to Health Science; Medical Terminology; Forensics; Anatomy and Physiology; Microbiology; Genetics; Psychology; Sociology; Art; Music |   |  |  |

## Out-of-Class Learning

| Work-Based Learning Opportunities   | Extracurricular Activities   |
|---|--|
| <ul style="list-style-type: none"> <li>• Job Shadowing</li> <li>• Clinical Rotation</li> <li>• Co-op Education</li> <li>• Internship</li> <li>• Mentorship</li> <li>• Part-time Employment</li> </ul> | <ul style="list-style-type: none"> <li>• Health Occupations Students of America (HOSA)</li> <li>• Medical Explorers</li> </ul> |

## After-High-School Options

| Two-Year/<br>Associate's Degree   | Four-Year/<br>Bachelor's Degree  | Graduate Degree   | Certification  | Other  |
|---|--|---|--|--|
| Examples: <ul style="list-style-type: none"> <li>• Medical Lab Technology</li> <li>• Radiologic Technology</li> </ul> | Examples: <ul style="list-style-type: none"> <li>• Nutrition</li> <li>• Psychology</li> <li>• Biology</li> </ul> | Examples: <ul style="list-style-type: none"> <li>• Biology</li> <li>• Psychology</li> <li>• Medical Technology</li> </ul> | Examples: <ul style="list-style-type: none"> <li>• Clinical Lab Technician</li> <li>• Nutritionist</li> <li>• Radiologic Technologist</li> </ul> | <ul style="list-style-type: none"> <li>• Military Service</li> </ul> |

## Possible Occupations

- Electrocardiographic (EKG) Technician
- Exercise Physiologist
- Geneticist
- Mammographer
- Medical Technologist
- Nuclear Medicine Technologist
- Nutritionist
- Pathologist
- Phlebotomist
- Radiographer
- Radiologist

\*Becomes a state requirement during the 2005–06 school year.

# Career Major Map: Therapeutic Services

Therapeutic Services employees work to counter the effects of disease and injury, maintaining or improving patients' health. These workers include physicians, veterinarians, dentists, psychologists, and the various people who assist them in the delivery of care.

## Sample High School Schedule

| 9th Grade  | 10th Grade                              | 11th Grade                                     | 12th Grade                                     |
|--|---|--|--|
| Math for the Technologies 1 or Algebra   | Math for the Technologies 2 or Geometry | Math for the Technologies 3 or Algebra 2       | Math for the Technologies 4 or Pre-Calculus    |
| Physical Science*  | Biology 1 or Science Elective           | Chemistry 1 or Science Elective                | Physics or Science Elective                    |
| English 1  | English 2                               | English 3 or Communication for the Workplace 3 | English 4 or Communication for the Workplace 4 |
| Global Studies (World History or World Geography)  | U.S. History and Constitution           | Economics/Government                           | Health Science Technology 2                    |
| Physical Ed. or Junior ROTC  | Computer Science                        | Health Science Technology 1                    | Recommended Elective                           |
| Recommended Elective   | Recommended Elective                    | Recommended Elective                           | Recommended Elective                           |
| <b>Recommended Electives (four major electives required to graduate with a Therapeutic Services major)</b>   |   |  |  |
| Introduction to Health Science; Emergency Medical Services 1, 2, 3, 4; Gerontology; Pharmacology; Sports Medicine 1 and 2; Medical Terminology; Anatomy and Physiology; Chemistry 2; Psychology; Sociology; Art; Music |   |  |  |

## Out-of-Class Learning

| Work-Based Learning Opportunities  | Extracurricular Activities   |
|--|--|
| <ul style="list-style-type: none"> <li>Clinical Rotations</li> <li>Job Shadowing</li> <li>Co-op Education</li> <li>Mentorship</li> <li>Internship</li> <li>Part-time Employment</li> </ul> | <ul style="list-style-type: none"> <li>Health Occupations Students of America (HOSA)</li> <li>Medical Explorers</li> </ul> |

## After-High-School Options

| Two-Year/<br>Associate's Degree   | Four-Year/<br>Bachelor's Degree   | Graduate Degree  | Certification  | Other  |
|---|---|--|--|--|
| Examples: <ul style="list-style-type: none"> <li>Nursing</li> <li>Dental Hygiene</li> <li>Assistant Physical Therapy</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Nursing</li> <li>Exercise Science</li> <li>Speech Pathology</li> <li>Recreational Therapy</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Dentistry</li> <li>Pharmaceutical Sciences</li> <li>Clinical Nutrition</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Certified Nurse's Aide (CNA)</li> <li>Emergency Medical Technician (EMT)</li> <li>Licensed Practical Nurse (LPN)</li> </ul> | <ul style="list-style-type: none"> <li>Military Service</li> </ul> |

## Possible Occupations

- Athletic Trainer
- Chiropractor
- Dental Hygienist
- Home Health Aide
- Massage Therapist
- Mortician
- Occupational Therapy Assistant
- Optometrist
- Pharmacy Technician
- Registered Nurse
- Veterinarian

\*Becomes a state requirement during the 2005–06 school year.

# Career Major Map: Health Informatics

Health Informatics workers manage and document healthcare system information to support patient care. These employees often work in hospitals providing the range of information-management services needed to maintain the delivery of healthcare.

## Sample High School Schedule

| 9th Grade  | 10th Grade                              | 11th Grade                                     | 12th Grade                                     |
|--|---|--|--|
| Math for the Technologies 1 or Algebra   | Math for the Technologies 2 or Geometry | Math for the Technologies 3 or Algebra 2       | Math for the Technologies 4 or Pre-Calculus    |
| Physical Science*  | Biology 1 or Science Elective           | Chemistry 1 or Science Elective                | Science Elective                               |
| English 1  | English 2                               | English 3 or Communication for the Workplace 3 | English 4 or Communication for the Workplace 4 |
| Global Studies (World History or World Geography)  | U.S. History and Constitution           | Economics/Government                           | Health Science Technology 2                    |
| Physical Ed. or Junior ROTC  | Computer Science                        | Health Science Technology 1                    | Recommended Elective                           |
| Recommended Elective   | Recommended Elective                    | Recommended Elective                           | Recommended Elective                           |
| <b>Recommended Electives (four major electives required to graduate with a Health Informatics major)</b>   |   |  |  |
| Introduction to Health Science; Medical Terminology; Introduction to Computer Technology; Computer Applications; Integrated Business Applications; Accounting 1; Marketing; Art; Music |   |  |  |

## Out-of-Class Learning

| Work-Based Learning Opportunities  | Extracurricular Activities   |
|--|--|
| <ul style="list-style-type: none"> <li>Clinical Rotations</li> <li>Job Shadowing</li> <li>Co-op Education</li> <li>Mentorship</li> <li>Internship</li> <li>Part-time Employment</li> </ul> | <ul style="list-style-type: none"> <li>Health Occupations Students of America (HOSA)</li> <li>Medical Explorers</li> </ul> |

## After-High-School Options

| Two-Year/<br>Associate's Degree  | Four-Year/<br>Bachelor's Degree  | Graduate Degree  | Certification  | Other  |
|--|--|--|--|--|
| Example: <ul style="list-style-type: none"> <li>Health Information Management</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Epidemiology</li> <li>Public Health Education</li> <li>Library Science</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Library Science</li> <li>Epidemiology</li> <li>Public Health Education</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Medical Assistant</li> <li>Medical Information Technologist</li> <li>Medical Librarian</li> </ul> | <ul style="list-style-type: none"> <li>Military Service</li> </ul> |

## Possible Occupations

- Admitting Clerk
- Applied Researcher
- Community Service Specialist
- Data Analyst
- Epidemiologist
- Healthcare Administrator
- Health Educator
- Health Information Coder
- Medical Biller
- Social Worker
- Unit Coordinator
- Utilization Manager

\*Becomes a state requirement during the 2005–06 school year.

# Career Major Map: Biotechnology Research and Development

Biotechnology Research and Development workers pursue advances in science and technology to support and improve the diagnosis and treatment of disease. These employees, often working in laboratories and offices in healing settings, perform scientific procedures that further the delivery of healthcare.

## Sample High School Schedule

| 9th Grade   | 10th Grade                              | 11th Grade                                     | 12th Grade                                     |
|---|---|--|--|
| Math for the Technologies 1 or Algebra  | Math for the Technologies 2 or Geometry | Math for the Technologies 3 or Algebra 2       | Math for the Technologies 4 or Pre-Calculus    |
| Physical Science*   | Biology 1 or Science Elective           | Chemistry 1 or Science Elective                | Physics or Science Elective                    |
| English 1   | English 2                               | English 3 or Communication for the Workplace 3 | English 4 or Communication for the Workplace 4 |
| Global Studies (World History or World Geography)   | U.S. History and Constitution           | Economics/Government                           | Health Science Technology 2                    |
| Physical Ed. or Junior ROTC   | Computer Science                        | Health Science Technology 1                    | Recommended Elective                           |
| Recommended Elective  | Recommended Elective                    | Recommended Elective                           | Recommended Elective                           |
| <b>Recommended Electives (four major electives required to graduate with a Biotechnology major)</b>   |   |  |  |
| Introduction to Health Science; Medical Terminology; Chemistry 2; Genetics; Anatomy and Physiology; Probability and Statistics; Physics; Microbiology; Forensics; Agriculture; Principles of Technology; Art; Music |   |  |  |

## Out-of-Class Learning

| Work-Based Learning Opportunities  | Extracurricular Activities   |
|--|--|
| <ul style="list-style-type: none"> <li>Clinical Rotations</li> <li>Job Shadowing</li> <li>Co-op Education</li> <li>Mentorship</li> <li>Internship</li> <li>Part-time Employment</li> </ul> | <ul style="list-style-type: none"> <li>Health Occupations Students of America (HOSA)</li> <li>Medical Explorers</li> </ul> |

## After-High-School Options

| Two-Year/<br>Associate's Degree  | Four-Year/<br>Bachelor's Degree  | Graduate Degree   | Certification  | Other  |
|--|--|---|--|--|
| Example: <ul style="list-style-type: none"> <li>Medical Laboratory Technology</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Biochemistry</li> <li>Microbiology</li> <li>Medical Technology</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Genetics</li> <li>Chemistry</li> <li>Toxicology</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Geneticist</li> <li>Quality Assurance Technician</li> <li>Quality Control Technician</li> </ul> | <ul style="list-style-type: none"> <li>Military Service</li> </ul> |

## Possible Occupations

- Biochemist
- Bioinformatics Specialist
- Biostatistician
- Clinical Trials Researcher
- Genetics Lab Technician
- Microbiologist
- Pharmaceutical Scientist
- Research Assistant
- Research Specialist
- Toxicologist

\*Becomes a state requirement during the 2005–06 school year.

# Career Major Map: Support Services

Support Services workers create and maintain a healthcare delivery environment that supports diagnosis and therapy. They maintain the health-care setting in a way that ensures the safe and efficient delivery of care.

## Sample High School Schedule

| 9th Grade   | 10th Grade                              | 11th Grade                                     | 12th Grade                                     |
|---|---|--|--|
| Math for the Technologies 1 or Algebra  | Math for the Technologies 2 or Geometry | Math for the Technologies 3 or Algebra 2       | Math for the Technologies 4 or Pre-Calculus    |
| Physical Science*   | Biology 1 or Science Elective           | Chemistry 1 or Science Elective                | Physics or Science Elective                    |
| English 1   | English 2                               | English 3 or Communication for the Workplace 3 | English 4 or Communication for the Workplace 4 |
| Global Studies (World History or World Geography)   | U.S. History and Constitution           | Economics/Government                           | Health Science Technology 2                    |
| Physical Ed. or Junior ROTC   | Computer Science                        | Health Science Technology 1                    | Recommended Elective                           |
| Recommended Elective  | Recommended Elective                    | Recommended Elective                           | Recommended Elective                           |
| <b>Recommended Electives (four major electives required to graduate with a Support Services major)</b>  |   |  |  |
| Introduction to Health Science; Medical Terminology; Food Science and Nutrition Technology 1 and 2; Engineering and Industrial Technology; Art; Music |   |  |  |

## Out-of-Class Learning

| Work-Based Learning Opportunities  | Extracurricular Activities   |
|--|--|
| <ul style="list-style-type: none"> <li>Clinical Rotations</li> <li>Job Shadowing</li> <li>Co-op Education</li> <li>Mentorship</li> <li>Internship</li> <li>Part-time Employment</li> </ul> | <ul style="list-style-type: none"> <li>Health Occupations Students of America (HOSA)</li> <li>Medical Explorers</li> </ul> |

## After-High-School Options

| Two-Year/<br>Associate's Degree  | Four-Year/<br>Bachelor's Degree   | Graduate Degree  | Certification  | Other  |
|--|---|--|--|--|
| Examples: <ul style="list-style-type: none"> <li>Electronics Engineering Technology</li> <li>General Technology</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Biomedical Engineering</li> <li>Environmental Health and Safety</li> </ul> | Examples: <ul style="list-style-type: none"> <li>Industrial/Operations Engineering</li> <li>Environmental Health Sciences</li> </ul> | Examples: <ul style="list-style-type: none"> <li>NA</li> </ul> | <ul style="list-style-type: none"> <li>Military Service</li> </ul> |

## Possible Occupations

- Biomedical/Clinical Engineer
- Central Services Assistant
- Electronics Engineering Technician
- Environmental Health and Safety Engineer
- Facilities Manager
- Food Service Assistant
- Hospital Maintenance Engineer
- Industrial Hygienist
- Materials Management Assistant
- Purchasing Agent
- Transport Technician

\*Becomes a state requirement during the 2005–06 school year.